

Work Order ID 60609

Page 1

Thursday, July 15, 2010 10:24:34 AM

Item ID: D206-642-541

Accept



Setup Start



Revision ID:

Item Name: Replacement Skidtube

Stop



Start Date: 7/15/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 7/22/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan:



Date: 10-7-15 Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr	Revision Nbr								
D3274	D								
IIN-D206-642	Rev M								

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile & type labels per PPP D206-642-541

CHG003

N/A 48

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center ID

110



Skidtubes

Operation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

0.00

Skidtubes

Memo

0.00

****VERIFY AND INSPECT THE MATERIAL PRIOR TO USE****

1- Bend FWD end of tube using bend prog D3274 FWD and foilo 10 as per dwg D3274, cut fwd end of tube with saw table setup D3274.

DP 10-7-20

2- remove fwd indexing ridge as per dwg D3274. Prepare for welding

PL 10/7/20

3- weld fwd cap as per dwg D3274 and QSI004

AR Aluminum Rod Batch: M112307/M114242 BE 10/07/20

4- grind fwd cap weld on top surface only

BE 10/07/20

5- Cut AFT end of tube at 170.9" as per dwg D3274 and deburr end.

6-Drill Aft cap pilot hole using DT8025

7 -Cleco DT8025 in position and install pilot hole drill Jig DT8025A,B,C,D.
Drill 3/16" pilot holes as per Dwg D3274

8 -Remove inner indexing ridge on aft end of skidtube as per Dwg D3274 scribe batch #

9 -Open aft end cap holes to Ø0.208" as per Dwg D3274. Deburr aft end.

10/7/20

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Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

120



HandFinish

Hand Finishing

Chemical Conversion Coat per QSI005 4.1

0.00

1 7/17/12

130



QC

Quality Control

QC3- Inspect Part Finish

0.00

S 10/07/12

Memo

0.00

140



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

S 10/07/12

Memo

0.00

(6)

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Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

150



Skidtubes

Skidtubes

0.00

0.00

Skidtubes

Memo
1-Open Ø0.313" and 0.375" crossbolt spacer holes using DT8743 as per Dwg D3274

2-Deburr crossbolt spacer holes as per Dwg D3274 and blow out chips from inside the tube

3-Bond web in place as per Dwg D3274 & QSI 015.
 A/R Sikaflex-291 11/15/14
 Sikaflex expire date: 11-1-30
 Start: 10-7-21 Time: 4 PM
 Finish: 10/7/22 Time: 830 AM
 (Adhere for 12 hours)

160



QC

QC5- Inspect part completeness to step on W/O

0.00

0.00

Quality Control

Memo

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Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

170



Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Bend AFT end of tube using bend prog. D3274 AFT as per dwg D3274. Install drop pins in crossbolt spacer holes to maintain web position.

2- DRILL PILOT HOLES FOR WEARPLATES USING D3274-1T2
OPEN HOLES TO .297". Deburr3-DRILL TOE PIN HOLE .640" DIA AS PER DWG USING DT8935 FWD
END OF TUBE
DEBURR INSIDE OF HOLE AS NECESSARY (DO NOT ENLARGE HOLES)
REMOVE ANY FOREIGN OBJECTS INSIDE OF TUBES

4- Countersink crossbolt spacer holes as per Dwg D3274

5- prepare for welding

180



QC

QC5- Inspect part completeness to step on W/O

0.00

L² 3.06
L² 4.9°

Quality Control

Memo

0.00

S 10/12/26

(70)

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Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberReject
NumberInsp.
Stamp

190



Skidtubes

Skidtubes

0.00

Skidtubes

- Memo
1-Insert D2649 & D3275-1 crossbolt spacers. Weld as per QSI 004 and Dwg D3274. Remember to back drill each hole before welding the other side. Use aluminum rod
A/R Aluminum Rod M112.507
3-Grind cross bolt welds flush as per Dwg D3274.
4-Counterbore 5/16" x 0.750" deep as per Dwg D3274 and deburr.

B/E → 10/07/28
10-7-28

200



QC5- Inspect part completeness to step on W/O

0.00

QC

Quality Control

Memo

0.00

S. Valuska
10-7-28

F

W/O:		WORK ORDER CHANGES					
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Customer:

Reference:

Approvals: Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start



QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

210



QC10- Inspect visual per QSI004- ground welds

0.00

8/10/2010

QC

Quality Control

220



Pressure Wash per QSI005 4.3

0.00

8/10/2010

HandFinish

Hand Finishing

Memo

0.00

1 8/10/2010

230



White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

11/14/2010

Powdercoat

Powder Coating

Memo

0.00

START TIME: 11:00
OVEN TEMPERATURE: 320°
FINISH TIME: 11:30

1 8/10/2010

W/O:		WORK ORDER CHANGES					
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Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

240



QC3- Inspect Part Finish

0.00

= 2 M 10/08/24

0.00

QC

Quality Control

250



HandFinishing

0.00

1 0

HandFinish

Memo
1-Install Nut Plate as per Dwg D3274. Apply LPS-3 to Nut Plate and rivets.
A/R□N/A□LPS-3□ M109956

0.00

= 2 M 10/08/24

Hand Finishing

2-Install inserts as per Dwg D3274. Use a drop of Sikaflex inside insert holes a
A/R□□Sikaflex-291 □ M115104
Sikaflex expire date: 11/104

260



QC5- Inspect part completeness to step on W/O

0.00

m 10 08 24 (1)

QC

Quality Control

Memo
Inspect Nut Plate & Inserts

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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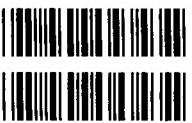
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Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
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QtyReject
QtyReject
NumberInsp.
Stamp

270



HandFinish

Hand Finishing

HAND FINISHING RESOURCE #1

Memo

0.00

7/15 10/08/2011

XL Q

1-Install wearpads & gaskets as per Dwg D3274.

2-Install ring as per Dwg D3274

A/R Sikaflex-291 11/15/04
Sikaflex expire date: 11/04

3-Inspect for foreign objects as per QSI 024

4-Spray inside of tube on both sides of web with LPS-3

A/R LPS-3 Batch: 11/7

5-Install Aft Cap and seal with Sikaflex. Clean excess adhesive.

A/R Sikaflex-291 11/15/04
Sikaflex expire date: 11/01

280



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

M 10 08 24 01

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Approvals: Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start



QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

290



Packaging

Packaging

Identify as per dwg & Stock Location: _____

0.00

300



QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

W/O:		WORK ORDER CHANGES					
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Picklist Print

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Parent Item: D206-642-541



Parent Item Name: Replacement Skidtube

Start Date: 7/15/2010

Required Date: 7/22/2010

Start Qty: 1.00

Required Qty: 1.00

Comments:

IPP Rev:B 05.09.23 Revised per D206-642 Rev. J KJ/JLM
IPP Rev:C 07-02-23 Added SS Wearplates & Gaskets JLM
IPP Rev:D 07-12-06 replace NAS1515H3L to D3672-1 DD
IPP Rev:E 08-04-17 as per PAR 08-015 DD verified by:EC
IPP Rev:F 08-06-02 add comment DD verified by:EC
IPP Rev:G 08-10-09 revise details DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2600-1-190		Manufactured	No			110	Each	32.0000	1	1			

Extrusion Round 3" 206

D3285-1		Manufactured	No	<u>Location</u>		Loc Qty	Loc Code	DP 10-7-20				
				LG	47575							
D3285-1		Manufactured	No			110	Each	149.0000	1	1		

Cap

D3282-041		Manufactured	No	<u>Location</u>		Loc Qty	Loc Code	DP 10-7-20
				LG	52511			
D3282-041		Manufactured	No		52647	149		

Float Web (206L/407)

		Manufactured	No	<u>Location</u>		Loc Qty	Loc Code	DP 10-7-21			
				LG	59886						
		Manufactured	No			150	Each	9.0000	1	1	

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Start Qty: 1.00

Required Qty: 1.00

D2649 Manufactured No 190 Each 69.0000 1 1

Cross Bolt Spacer

Location Loc Qty Loc Code 860652 x12 8610/07/28
LG 69
58545 69

D3275-1 Manufactured No 190 Each 17.0000 12 12

Crossbolt Spacer

Location Loc Qty Loc Code 860653 x12 8610/07/28
LG 17
53453 8
57513 9

CR3212-4-03 Purchased No 250 Each 3,739.0000 2 2

Cherry Rivet

Location Loc Qty Loc Code
ST311 3739
111359 5
112314 30
114436 1142
114450 564
114859 1998
x141 10/08/24

D3415-041 Manufactured No 250 Each 61.0000 1 1

Nut Plate

Location Loc Qty Loc Code
ST056 61
33842 61
x141 10/08/24

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Required Date: 7/22/2010

Start Qty: 1.00

Required Qty: 1.00

CCR264SS3-3

Purchased

No

250

Each

540.0000

2

2



Cherry Rivet

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST311	540	
112314	4	
113539	60	
113973	476	

ALS4-1032-130

Purchased

No

250

Each

4,506.000

78

78



Insert

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
PKG11	4190	
114723	4190	
ST282	277	
110511	38	
114407	239	
ST381	39	
114654	39	

D3536-15

Manufactured

No

270

Each

13.0000

1

1



Gasket

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP	6	
56055	6	
FP11	7	
59238	7	

W/O:		WORK ORDER CHANGES					
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Required Date: 7/22/2010

Start Qty: 1.00

Required Qty: 1.00

D3536-23



Manufactured No

270

Each

6.0000

1

1



Gasket

Location

FP011

Loc Qty

6

Loc Code

B60234

x1 M10108121

D3536-35



Manufactured No

270

Each

11.0000

1



Gasket

Location

FP012

Loc Qty

11

Loc Code

B60235

x1 M10108121

D3536-39



Manufactured No

270

Each

21.0000

1



Gasket

Location

FP12

Loc Qty

21

Loc Code

B60235

x1 M10108121

D3535-15



Manufactured No

270

Each

10.0000

1



Wearshoe

Location

FP18

Loc Qty

10

Loc Code

B60236

x1 M10108121

D3535-35



Manufactured No

270

Each

7.0000

1



Wearshoe

Location

FP018

Loc Qty

7

Loc Code

B60232

x1 M10108121

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Thursday, July 15, 2010 10:24:40 AM

Page 5

Work Order ID: 60609



Parent Item: D206-642-541



Parent Item Name: Replacement Skidtube

Start Date: 7/15/2010

Required Date: 7/22/2010

Start Qty: 1.00

Required Qty: 1.00

D3535-39



Manufactured No

270

Each

8.0000

1

1



Wearshoe

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP18

8

58214

8

X1 M 10/08/20

D3535-23



Manufactured No

270

Each

5.0000

1



Wearshoe

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP21

5

B 60861

57730

5

X1 M 10/08/20

D3537-3



Manufactured No

270

Each

20.0000

1



Wearpad

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP17

4

57512

4

FP19

16

59711

16

X1 M 10/08/20

D3537-1



Manufactured No

270

Each

44.0000

9



Wearpad

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP

1

55465

1

B 60491

FP17

43

57713

3

59593

40

X9M 10/08/20

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng./ Prod Mgr.	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Thursday, July 15, 2010 10:24:40 AM

Page 6

Work Order ID: 60609



Parent Item: D206-642-541



Parent Item Name: Replacement Skidtube

Start Date: 7/15/2010

Required Date: 7/22/2010

Start Qty: 1.00

Required Qty: 1.00

AN960C10L

NAS1149C0332
R

Purchased

No

270

Each

0.0000

80

80

MU115000



x80 MU 10108120

washer

AN960C416

NAS1149C0463
R

Purchased

No

270

Each

113.0000

1

1

MU115000



washer

D3672-1

Manufactured

No

Location

ST346

Loc Qty

113

Loc Code

100993

x1 MU 10108120

Phenolic Washer

AN3C4A

Purchased

No

Location

ST077

Loc Qty

1033

Loc Code

51674

x2 MU 10108120

BOLT

Location

ST350

Loc Qty

1559

Loc Code

114103

x90 10108120

114108

501

114416

14

114523

12

114859

2

114941

30

1000

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 7

Thursday, July 15, 2010 10:24:40 AM

Work Order ID: 60609



Parent Item: D206-642-541



Parent Item Name: Replacement Skidtube

Start Date: 7/15/2010

Required Date: 7/22/2010

Start Qty: 1.00

Required Qty: 1.00

AN4C5A



Purchased

No

270

Each

513.0000

1

1



BOLT

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST346	513	
110552	13	
112243	500	

x1 M 10108124

D2646



Manufactured

No

270

Each

94.0000

1



Aft Cap

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP-4	85	
57332	85	
FP6	9	
52663	9	

x1 M 10108124

D3413-1



Manufactured

No

270

Each

31.0000

1



Ring

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST473	31	
51586	1	
53446	23	
58524	7	

x1 M 10108124

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

SH^Y
 RE²
 ENC¹
 SUBJECT^{NDMENT}
 WITH^{TECH}
 NO.
DART
 UNCONT^{ED}
 WOTH
 NO.
 Colby
 Bobo 725

RELEASED
 07.02.12

DEO ATTACHED

DESIGN	DRAWN BY	DART AEROSPACE USA, INC. PORT HADLOCK, WA
CHECKED	APPROVED	DRAWING NO. D3274
		REV. D SHEET 1 OF 4
DATE	TITLE	SCALE
06.12.19	SKIDTUBE ASSEMBLY	NTS
A	04.03.15	NEW ISSUE
B	04.08.09	MOVE SADDLE HOLE: 42.14 WAS 42.76
C	05.03.16	ADD -043; NEW INSERTS
D	06.12.19	NEW INSERTS, SS WEARSHOE + GASKET

Qty -041	Qty -043	Part Number	Description
X		D3274-041	SKIDTUBE ASSEMBLY
	X	D3274-043	SKIDTUBE ASSEMBLY
1	1	D2600-1-240	EXTRUSION
1	1	D2646	AFT CAP
12	12	D2649	CROSS BOLT SPACER
12	37	D3275-1	CROSS BOLT SPACER
1	1	D3282-041	FLOAT WEB
1	1	D3285-1	CAP
1	1	D3413-1	RING
1	1	D3415-041	NUT PLATE
1	1	D3535-15	WEARSHOE
1	1	D3535-23	WEARSHOE
1	1	D3535-35	WEARSHOE
1	1	D3535-39	WEARSHOE
1	1	D3536-15	GASKET
1	1	D3536-23	GASKET
1	1	D3536-35	GASKET
1	1	D3536-39	GASKET
9	9	D3537-1	WEARPAD
1	1	D3537-3	WEARPAD
78	78	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, AELS-1032-130)
80	80	AN3C4A	BOLT
1	1	AN4C5A	BOLT
1	1	AN960C416	WASHER
80	80	AN960C10L	WASHER
2	2	CCR264SS3-3	RIVET
2	2	CR3212-4-03	RIVET
2	2	NAS1515H3L	WASHER

GENERAL NOTES:

1. TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
2. DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 7 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
3. ALL HOLES DRILLED ON CENTERLINES.
4. BOND D3282-041 FLOAT WEB INTO D3274-1/3 OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/291 ADHESIVE PER DART QSI 015. ENSURE HOLES LINE-UP.
5. WELDING TO BE DONE PER DART QSI 004.
6. FINISH: - ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1
- POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
7. DRILL Ø0.297 HOLES FOR ALS7-1032-130 INSERTS USING DT3274-1T2 BEFORE FINISH. INSTALL ALS7-1032-130 INSERTS AFTER FINISH. SEAL WEARSHOE BOLTS WITH SIKAFLEX-241/291.
8. SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

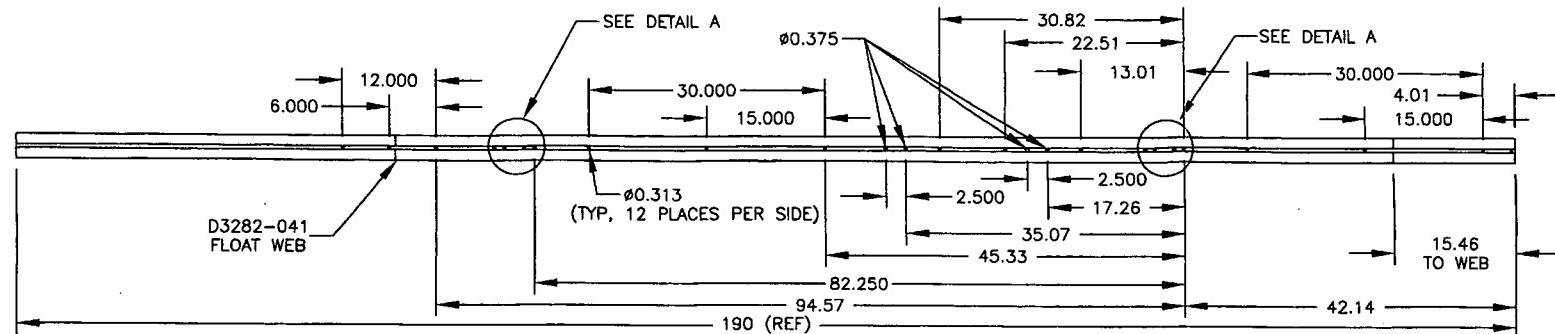
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

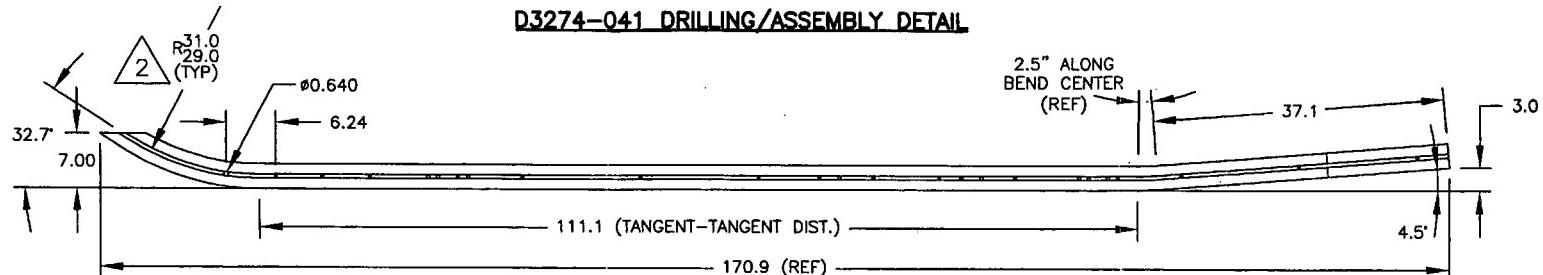
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

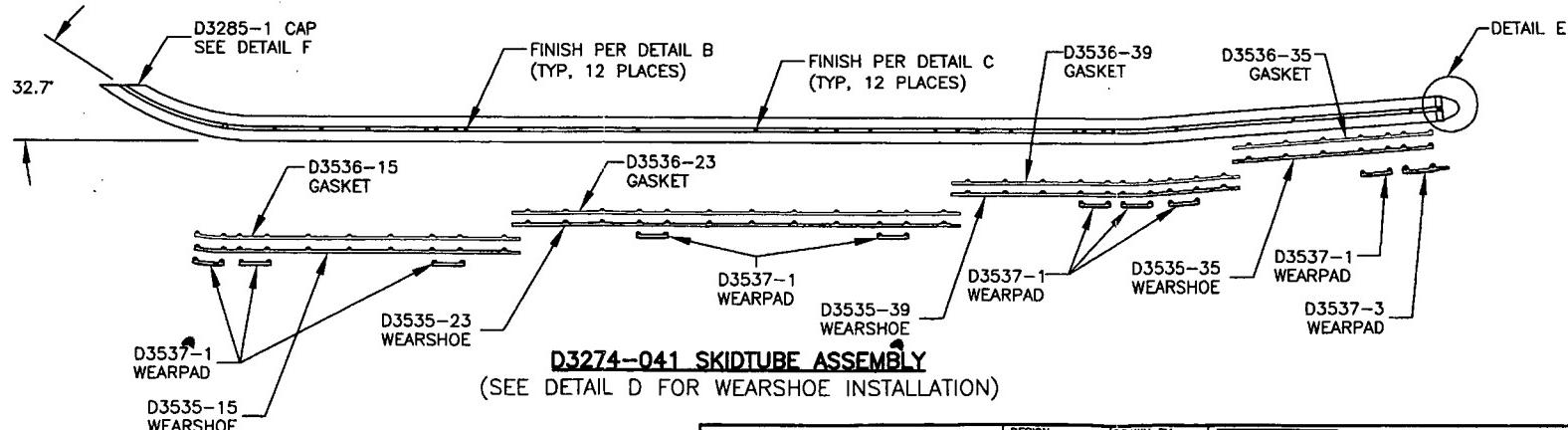
DEO ATTACHED



D3274-041 DRILLING/ASSEMBLY DETAIL



D3274-041 BEND/DRILLING DETAIL



D3274-041 SKIDTUBE ASSEMBLY
(SEE DETAIL D FOR WEARSHOE INSTALLATION)

RELEASED

07.02.12

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DESIGN	DRAWN BY	DART	DART AEROSPACE USA, INC. PORT HUENEMER, MA
CP	PJ		REV. D
CHECKED	APPROVED		DRAWING NO. D3274
DATE		TITLE	SKIDTUBE ASSEMBLY
06.12.19		SCALE	1:15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

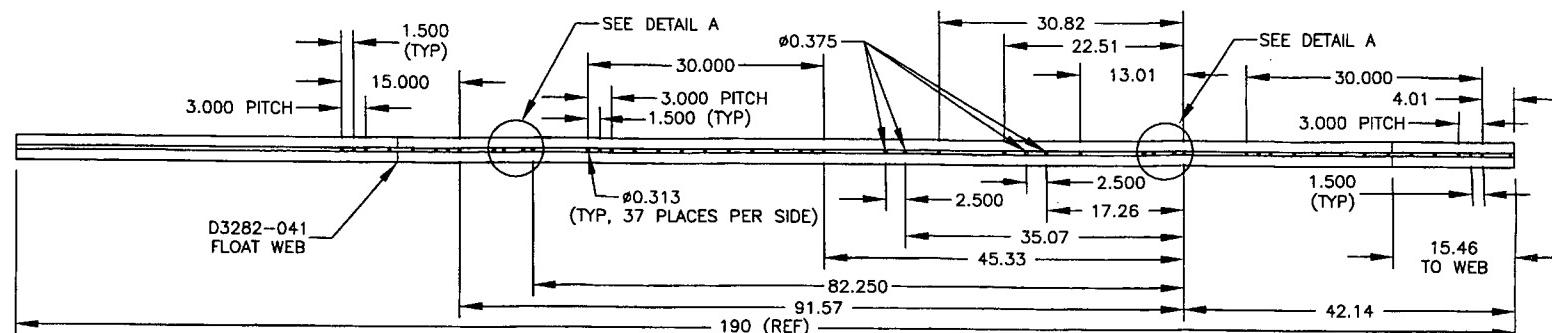
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

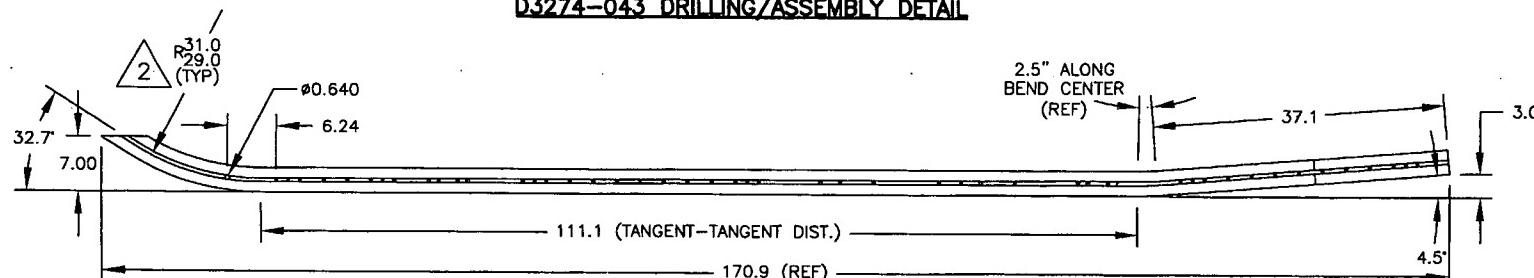
NOTE: Date & initial all entries

u1020609

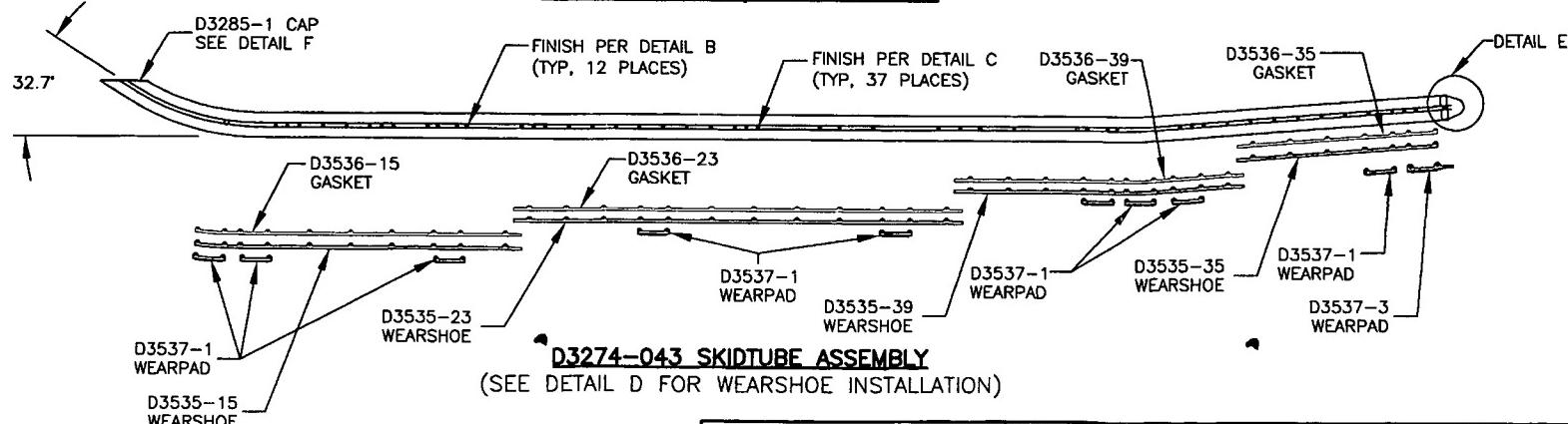
DEO ATTACHED



D3274-043 DRILLING/ASSEMBLY DETAIL



D3274-043 BEND/DRILLING DETAIL



D3274-043 SKIDTUBE ASSEMBLY
(SEE DETAIL D FOR WEARSHOE INSTALLATION)

RELEASED

07-02-12

DESIGN	DRAWN BY	DART	DART AEROSPACE USA, INC. PORT HEDLOCK, WA
CP	PH		REV. D
CHECKED	APPROVED	D3274	SHEET 3 OF 4
DATE	TITLE	06.12.19	SCALE 1:15

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

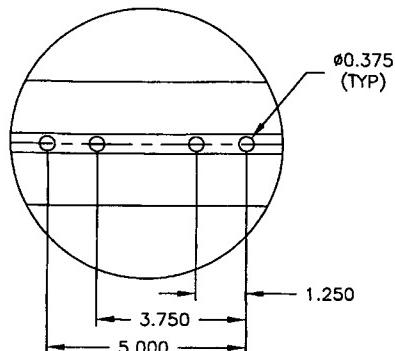
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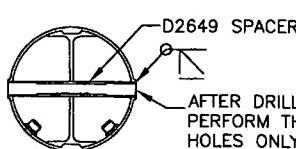
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DETAIL A: DRILL DETAIL



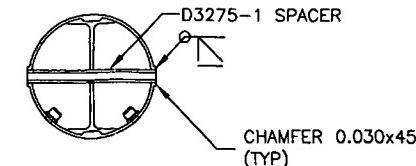
DETAIL B
FOR Ø0.375 HOLES ONLY



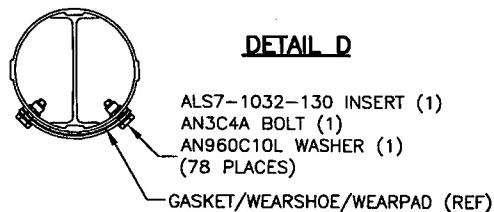
AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.375
HOLES ONLY:

1. CHAMFER HOLE 0.030x45°
2. INSERT D2649 SPACER
3. WELD INTO PLACE AND GRIND FLUSH
4. C'BORE TO Ø0.313x0.75 DEEP

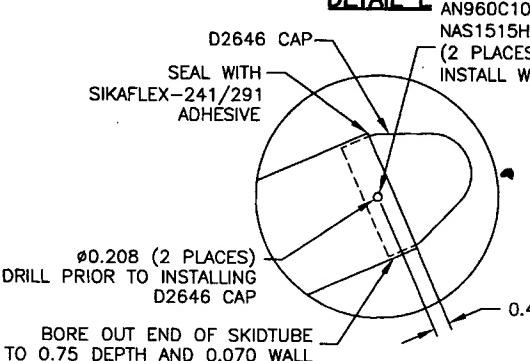
DETAIL C
FOR Ø0.313 HOLES ONLY



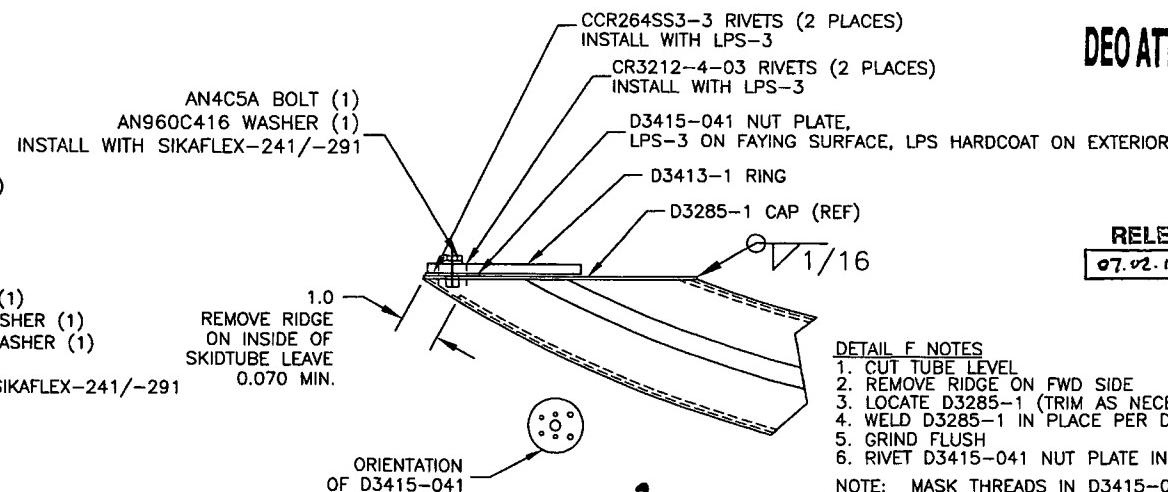
DETAIL D



DETAIL E AN3C4A BOLT (1)



DETAIL F: END FINISHING DETAIL



DET ATTACHED

RELEASED

07.02.12

DETAIL F NOTES

1. CUT TUBE LEVEL
2. REMOVE RIDGE ON FWD SIDE
3. LOCATE D3285-1 (TRIM AS NECESSARY)
4. WELD D3285-1 IN PLACE PER DART QSI 004
5. GRIND FLUSH
6. RIVET D3415-041 NUT PLATE IN PLACE

NOTE: MASK THREADS IN D3415-041
PRIOR TO FINISH

cwb 60609

COPYRIGHT © 2004 BY DART AEROSPACE USA, INC.	DESIGN CP	DRAWN BY <i>MH</i>	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
CHECKED <i>#</i>	APPROVED <i>#</i>	DRAWING NO. D3274		
DATE 06.12.19		TITLE SKIDTUBE ASSEMBLY		
REV. D SHEET 4 OF 4 1:13				

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

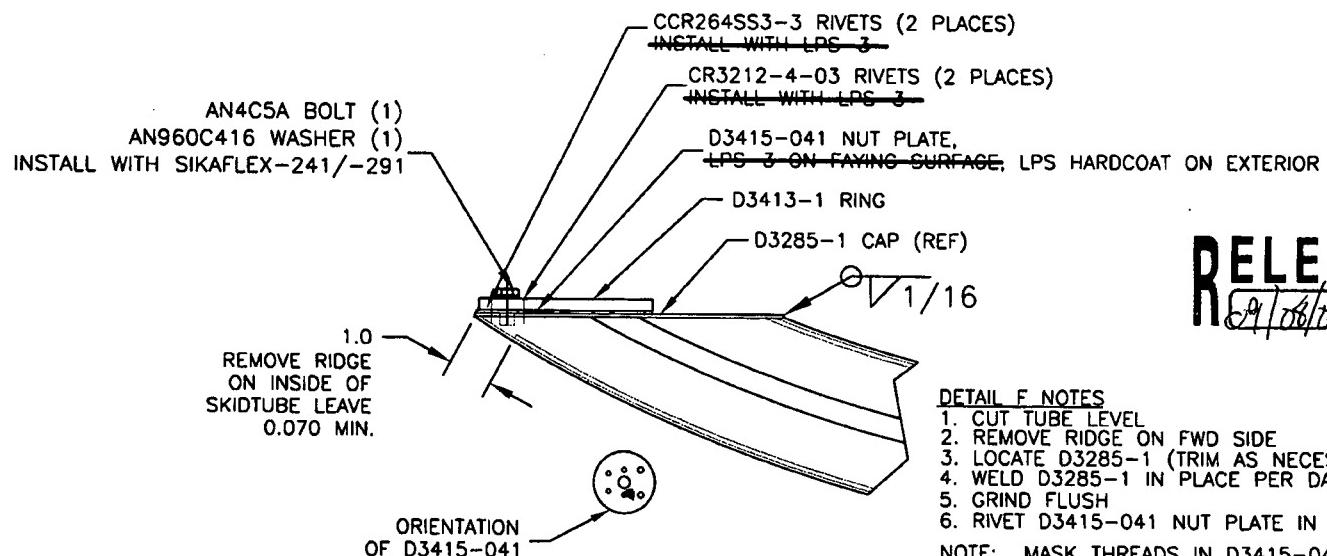
DRAWING NO. D3274	TITLE SKIDTUBE ASSEMBLY	REV. D	DART AEROSPACE USA, INC ENGINEERING ORDER	D.E.O. NO. D3274-D-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>CP</i>	CHECKED		MFG. APPR. <i>AM</i>	APPROVED <i>JAF</i>	DE APPR. <i>TH</i>	
DATE 09.06.17	DATE 09.06.23		DATE 09/06/23	DATE 09/06/23	DATE 09.06.23	

LPS-3 IS NO LONGER USED DURING ASSEMBLY OF SKIDTUBE.

AMEND NOTE 8: "~~SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES 'LPS 3' AFTER FINISH AND INSTALLATION OF INSERTS.~~
~~COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES 'LPS PROCYON' AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.~~"

AMEND DETAIL F AS SHOWN:

DETAIL F: END FINISHING DETAIL



RELEASED
09/06/09

DETAIL F NOTES

1. CUT TUBE LEVEL
 2. REMOVE RIDGE ON FWD SIDE
 3. LOCATE D3285-1 (TRIM AS NECESSARY)
 4. WELD D3285-1 IN PLACE PER DART QSI 004
 5. GRIND FLUSH
 6. RIVET D3415-041 NUT PLATE IN PLACE
- NOTE: MASK THREADS IN D3415-041 PRIOR TO FINISH

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

NO. 235

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Berkeley Elliott
Job number: SGT80
Part number: D206-642-541
Description: 206 skid tube
Welding Process: Tig Mig
Base material: Aluminium
Current: AC DC

TEST REQUIREMENTS AND RESULTS

Visual: pass fail
Penetration: pass fail

UNACCEPTABLE

Cracks: pass fail
Undercut: pass fail
Pin holes: pass fail
Overlap (cold lap) pass fail
Porosity (surface): pass fail
Coloration: pass fail

Qualifier J. D. D. Date of Test Coupon 10.07.01
Welder Berkeley Elliott Date of Test Coupon 10.07.01

The above named individual is qualified in accordance with AWS D17.1.2001 to weld